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## **MEMORANDUM**

**DATE:** February 12, 2001  
**TO:** Mal Murphy [malmurphy@home.com]  
**CC:** Danielle Fife [dfife@nrff.com]  
**RE:** **SATURATED ZONE FLOW & TRANSPORT AMR Reviews**  
**Saturated Zone Transport Methodology & Transport Component**  
**Integration**  
**MDL-NBS-HS-000010**

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This AMR describes Particle Tracking methodology used in the SZ site-scale model. Key items include:

1. This AMR is basically descriptive, and contains comparisons to analytical solutions. As such, it relates to the technology used, and not to specific analyses of YMP. **The particle-tracking model is the main source of retardation in the SZ.** As seen from this AMR, they have extended the technology to allow for directional (anisotropic) permeability and dispersion, which was not contemplated in the original papers on Particle Tracking. They also made certain corrections when the permeability contrast between zones was high. For these reasons, **I RECOMMEND THAT WE OBTAIN THE VARIOUS REFERENCES ON THE METHODOLOGY AND INVESTIGATE THEIR PARTICLE TRACKING APPROACH IN MORE DETAIL.**
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